MACHINE SERVICE BULLETIN #112

SUBJECT: Lock for Clear-out Mechanism "C" and "E" Models

DATE: March 6, 1931

TO ALL OFFICES:

We are releasing, herewith, a sheet of prints together with the following instructions which illustrate and describe how to install a new lock for the "C" and "E" model machines for the purpose of preventing the possibility of the clear-out mechanism from locking up under rapid operation of the clear keys.

This mechanism is designed so that service men can install it in machines now in the field and we are forwarding, under separate cover, sufficient material and tools to convert all of the machines of these models which have been shipped to your District to date.

INSTRUCTIONS

Remove the carriage, motor, cover case and bottom pan according to instructions in Field Service Bulletin #108, Plate 15, Items 30, 31 and 32. Remove levers K as per Item 33. Remove the motor bracket, Items 41 and 42, plate 18.

Remove shafts 1552 that are fastened with retaining rings 85 and that carry parts C, D, E, F and G, Plate 18, which are identified by part numbers on Plate 27.

Place the drill jig on the motor bracket with the side of the jig marked A, out. Pins 1 and 2 of the jig should be located in the holes in the motor bracket as shown in figure 1 of the attached sketch. Drill holes A, through the motor bracket with a #32 drill. If the drill starts to chatter after the holes are started, remove the jig and complete the drilling without the jig, and thread these holes with a #6-40 tap.

Next, drill one hole in plate 1520 as shown in figure 3, with the side of the jig marked B, out, and with pins 1 and 2 of the jig located in the holes in the plate corresponding to the same holes in the motor bracket. This hole, B, should also be drilled with a #32 drill, but it is not to be tapped.

Replace parts C, D, E and F, plate 18, in their original position. In place of the original parts that were assembled on the lower 1552 shaft, parts shown in figure 4, are to be used. These are to be assembled as follows: First, the gear, 1536x1, goes over the left end of the 946 shaft with the smooth side of the gear away from the shoulder of the 946. Next, the fibre washer, 920, is assembled; then the collar, 1536-1/8, with the smooth side next to the fibre washer; then the clutch drum G, plate 18, which was removed from the bracket; then the spring, 1585, and the two lock nuts, 945. Assemble gear 1536¼ on the right end

of shaft 946 and place this unit in the motor bracket and assemble shaft1552 in place with retaining ring 85. The tension of the 985 spring should be as light as possible and yet not allow the clutch drum to slip in normal operation from the middle clearout key.

Replace the motor bracket on the machine and replace the levers K, plate 15.

Screw the 947 screw into the tapped hole in the left-hand end of the lock assembly, 9-34. This screw goes into the hole which was drilled in the 1520 plate. The bracket is fastened to the casting, with two #6 screws, into the holes that were drilled and tapped. (See figure 6). If a variation in the casting should cause a clearance between the casting and the assembly, 9-34, when the left end of the 9-34 is up against the 1520 plate, it will be necessary to pack thin washers between the 9-34 and the casting to take up this space before tightening screws #6. This is necessary to prevent the 9-34 from being sprung. However, if the variation is the other way, so that when the 9-34 is screwed tight against the casting, and the left-hand end is not tight against the plate, this can be taken care of by adjusting the eccentric stud, 1171, as 947 is long enough to act as a dowel.

The new lock functions in such a way that when either of the noses for clearing the upper or the lower dials is out, the other one is locked in. Stud A, figure 6, is an eccentric for adjustment. Figure 6 shows the position of the lock with the nose for clearing the lower dials out. Figure 7 shows the position of the lock with the nose for clearing the upper dials out. The lock should be adjusted so that when the upper dial nose is out, it rides up onto the high spot on the lock as shown. Also, when either nose is out, the locking piece should have a slight play. This may be tested by depressing each of the clear keys in turn and turning the driving lug on the end of the sun gear in a counter-clockwise direction, until the nose has released the clutch drums and the clutch drums have started to rotate. NOTE: If there is not enough movement in the eccentric adjustment "A" to take up any excessive play that may exist between the lock and the nose which is engaged, it will be necessary to adjust the nose which is not engaged farther away from the drum, as explained on Plate 22 of Machine Service Bulletin #108.

If the clear key for the upper dials is depressed and the driving lug rotates enough to start the clutch drum, and then the key is released and the middle clearing key depressed, the adjustment of the 1585 spring should be such that it allows the clutch drum G, plate 18, to slip until the upper dial clutch drum has completed its cycle. However, this drum should not

slip in normal operation from the middle clear-out key. If it does, tighten up on nuts 945 to create more friction.

When the nose for the upper dial clutch comes out and starts to ride up on the high part of the locking piece, if it should catch, stone the corner slightly more round at point B, figure 7.

After the lock has been adjusted, replace the motor and carriage and test the machine for operation. Finally, replace the bottom pan and cover case.

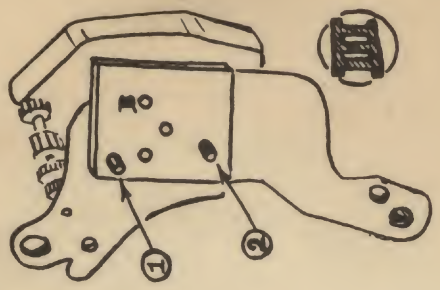
It will be to the advantage of all concerned to complete the conversions referred to in the foregoing with the least possible delay and, in this connection, it is very important that you furnish this Department with a memorandum report listing the serial number of each machine converted in order that our records may not only be accurate but also agree with yours.

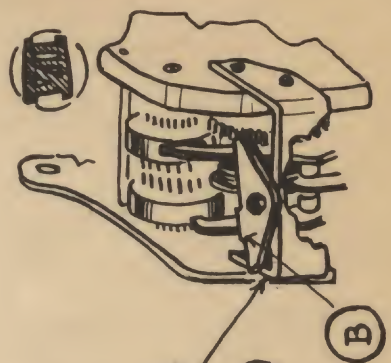
F. M. Smith

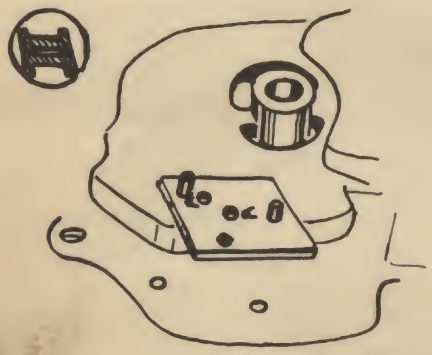
FMS:GBC

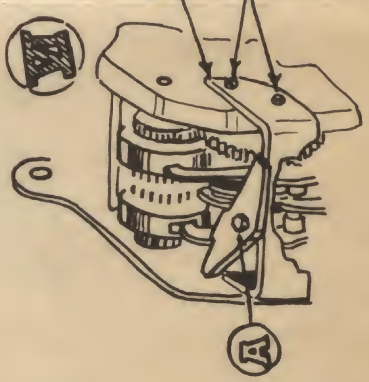
General Service Manager

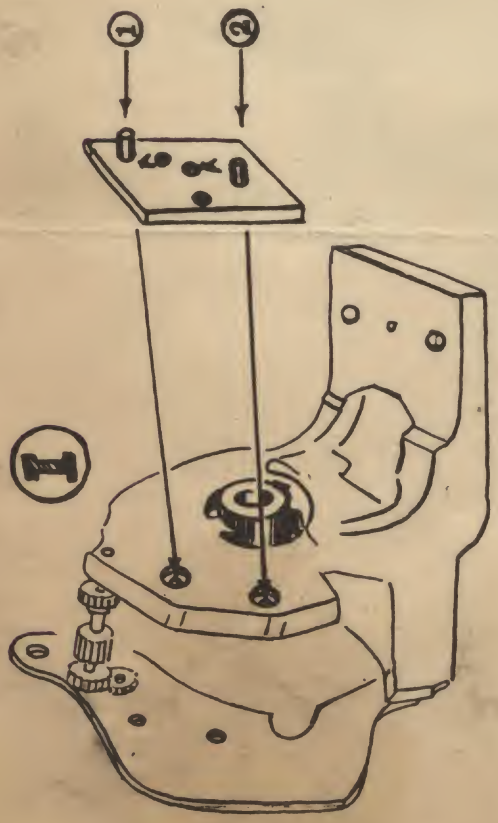
Machine Service Bulletin No. 112

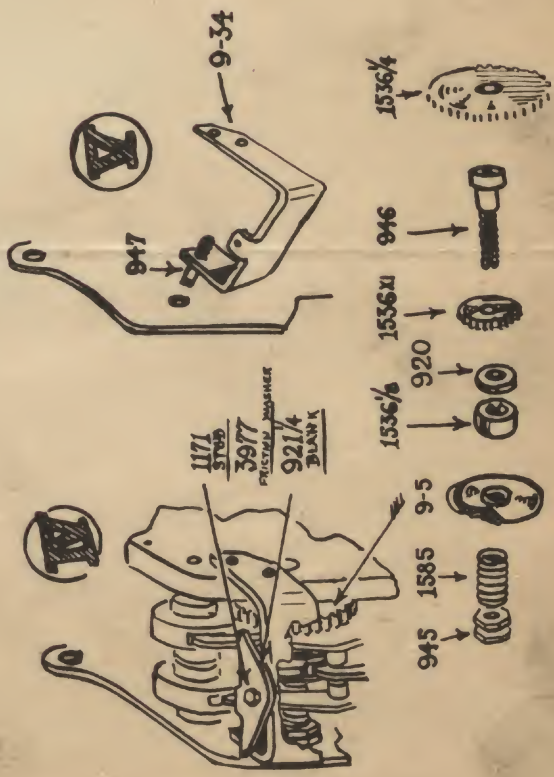












Mr. M. Hitchcox
Toledo, Ohio